Claim Amendments

1. (currently amended) A method, comprising steps of:

transmitting from a transmitter of a first transceiver a plurality of symbols over a communication channel that imparts inter-symbol interference to said symbols;

~~filtering of the plurality of symbols with a transmit filter that provides a first pulse shaping characteristic to the transmitted symbols;~~

receiving at a receiver of a second transceiver said symbols;

~~filtering of the received symbols at the second transceiver with a receiver filter that provides a second pulse shaping characteristic that matches the first pulse shaping characteristic of the transmit filter;~~

determining a soft decision metric at thea receiver of the second transceiver for the plurality of symbols;

employing the soft decision metric at the receiver of the second transceiver to determine mean symbol error probability or mean bit error probability;

transmitting from the second transceiver to the first transceiver a signal that carries said mean symbol error probability or mean bit error probability;

comparing at the first transceiver the mean symbol or bit error probability to one or more predetermined thresholds to select a communication protocol of the communication channel;

wherein the first transceiver implements athe first communication protocol for the communication channel upon the mean symbol or bit error probability exceeding a first threshold of the one or more predetermined thresholds;

wherein the first transceiver implements a second communication protocol for the communication channel upon the symbol or bit error probability exceeding a second threshold of the one or more predetermined thresholds.

2-4. Canceled.

5. (previously presented) The method of claim 1 wherein the step of determining the soft decision metric comprises deriving the soft decision metric from an output of at least one of an equalizer and a demodulator.

6. (original) The method of claim 5, wherein the output of the equalizer or demodulator comprises a log likelihood ratio.

7. (original) The method of claim 1, wherein the transmitted symbols comprise binary values.

8-10. Canceled.

11. (previously presented) The method of claim 1, wherein the step of comparing the mean symbol or bit error probability to the one or more predetermined thresholds to select the communication protocol of the communication channel comprises a step of selecting at least one of a modulation scheme, a coding scheme, symbol rate, and a power level.

12. Canceled.

13. (currently amended) A system comprising:

a transmitter of a first transceiver adapted to transmit a plurality of symbols over a communication channel that imparts inter-symbol interference to said symbols;

~~transmit filter in the transmitter adapted to filter the plurality of symbols to provide a first pulse shaping characteristic to the transmitted symbols;~~

a receiver of a second transceiver adapted to receiver said symbols;

~~receiver filter in the receiver adapted to filter the received symbols to provide a second pulse shaping characteristic that matches the first pulse shaping characteristic of the transmit filter;~~

a decision device in the receiver of the second transceiver adapted to provide a plurality of soft decision metrics for athe plurality of symbols received over the communication channel;

a processor in the receiver of the second transceiver employs the soft decision metric to determine mean symbol error probability or mean bit error probability;

means for transmitting from the second transceiver to the first transceiver a signal that carries said mean symbol error probability or mean bit error probability; and

~~a processor in the transmitter adapted to obtain an error rate estimate through employment of symbol or bit error probability values computed from the soft decision metrics;~~

athe processor in the first transceiver compares the mean symbol or bit error probabilityies values to one or more predetermined thresholds to select a communication protocol of the communication channel;

the first transceiver implements the first communication protocol for the communication channel upon the mean symbol or bit error probability exceeding a first threshold of the one or more predetermined thresholds and implements a second communication protocol for the communication channel upon the mean symbol or bit error probability exceeding a second threshold of the one or more predetermined thresholds.

14-16. Canceled.

17. (previously presented) The system of claim 13, wherein the decision device comprises one or more of a demodulator and an equalizer.

18. (previously presented) The system of claim 13, wherein the decision device performs demodulation through employment of a Viterbi decoder algorithm or a variant of the Viterbi decoder algorithm.

19. (previously presented) The system of claim 13, wherein the decision device performs equalization through employment of one or more of a Bahl-Cocke-Jelinek-Raviv algorithm, a soft output Viterbi algorithm, a variant of the Bahl-Cocke-Jelinek-Raviv algorithm, and a variant of the soft output Viterbi algorithm.

20-26. Canceled.

27. (New) The method of claim 1, wherein the step of employing the soft decision metric at the receiver of the second transceiver to determine mean symbol error probability or mean bit error probability consists of employing only the soft decision metric to determine mean symbol error probability or mean bit error probability.

28. (New) The system of claim 13 wherein the decision device in the receiver of the second transceiver provides only soft decision metrics for the plurality of symbols received over the communication channel and the processor in the receiver of the second transceiver employs only the soft decision metric to determine mean symbol error probability or mean bit error probability.